Condair 505

Luftbefeuchter / Air humidifier / Humidificateur d’air / Umidificatore d’aria

BETRIEBSANLEITUNG
OPERATING INSTRUCTIONS
MODE D’EMPLOI
ISTRUZIONI PER L’USO

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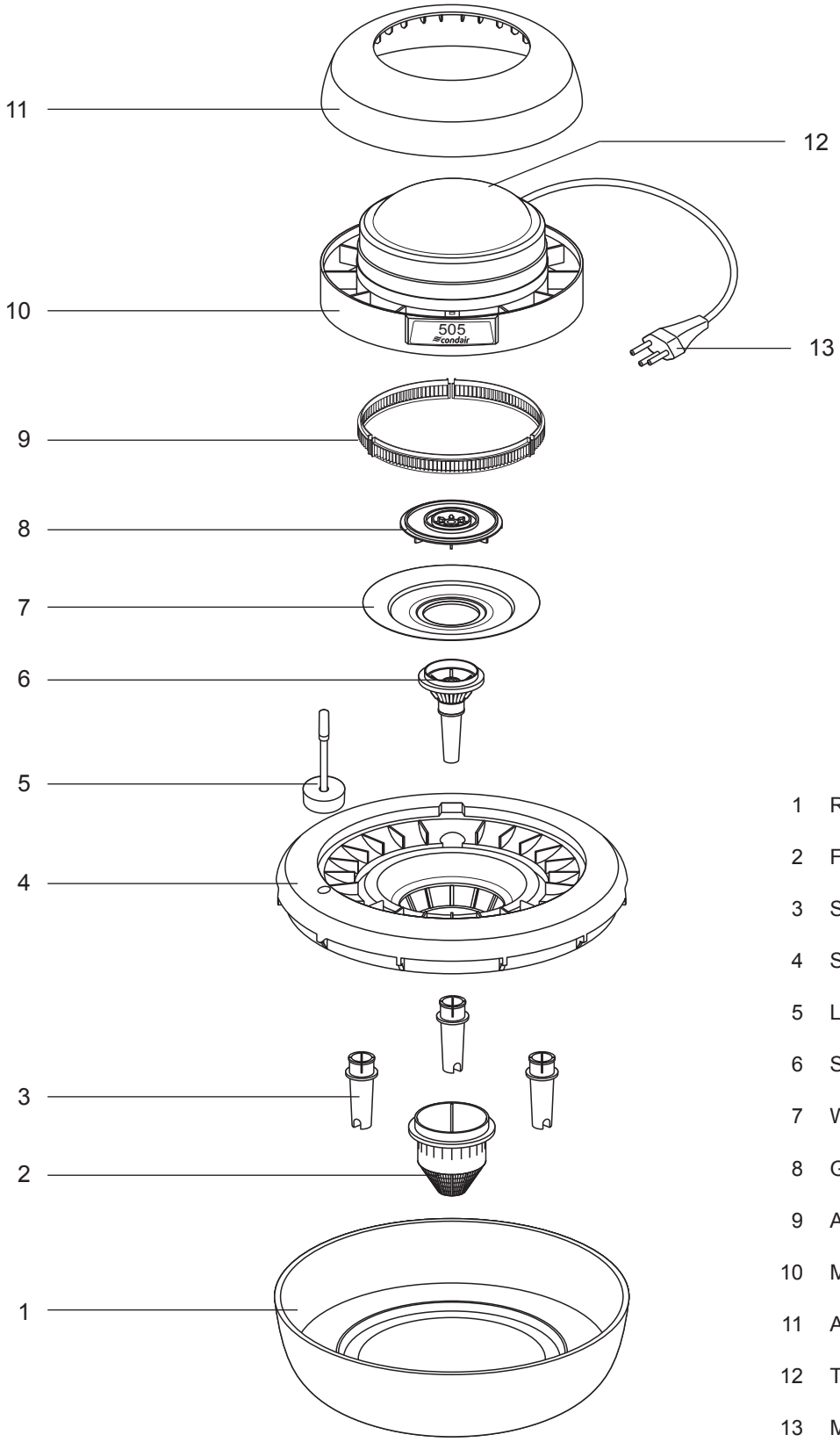
condair

Unit survey



1 Reservoir

2 Filter

3 Stand

4 Support disk

5 Level detector assembly

6 Suction piece

7 Whirl disk

8 Guiding disk

9 Atomizer ring

10 Motor housing assembly

11 Aerosol discharge hood

12 Type plate

13 Mains cable with ground wire

1 Introduction

We thank you for having purchased the Condair 505 air humidifier. The Condair 505 is a compact humidifier that is easy to operate and maintain. A selection of optional accessories are available to customize the humidifier to your particular requirements.

The Condair 505 air humidifier is designed in accordance with the latest state of the art and the present safety regulations. In the event of improper use, however, danger can arise for the user or third parties and or impairment of the unit or other material assets. Carefully read these Operating Instructions prior to setting the humidifier into operation as they contain valuable information on safe and economic use of your Condair 505.

Please keep this manual in a safe place where it will be at hand whenever you need it. In case of loss please contact your Condair representative for immediate replacement.

2 Important notes

2.1 Directed scope of use

The Condair 505 is **exclusively** intended for direct room humidification under strict adherence to the information and notes given in this manual. Any use beyond this scope is considered to be a violation of the intended purpose and may endanger your safety or possibly cause the product to be damaged. Any use other than the intended purpose of the Condair 505 is **at customer's own risk and for no means the manufacturer or supplier will be liable for possible damage**.

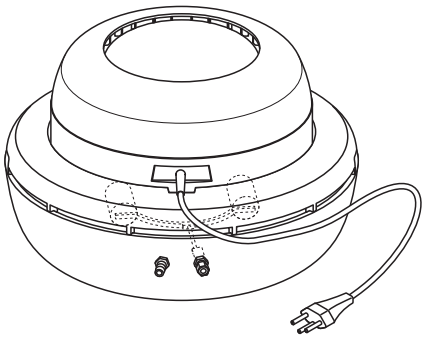
2.2 Safety instructions

- The Condair 505 should be installed, serviced, maintained and repaired only by qualified persons familiar with the equipment.
- The Condair 505 **must not be used in hazardous locations**.
- Before connecting the unit to the mains make sure:
  - the operating voltage of the Condair 505 (see type plate on unit) meets the local mains voltage.
  - the power cord is not damaged.
- The Condair 505 may be connected to a **grounded socket only**. Do not disable protection using an extension cord without ground wire. The ground wire must neither be disconnected nor interrupted inside or outside the unit as this may endanger your safety.
- The Condair 505 operates at mains voltage. Never dip the unit into water and protect it from splashes.
- Before cleaning or maintaining the Condair 505 disconnect the unit from the mains (pull the plug out of the socket).
- Make sure your hands are absolutely dry when pulling the mains plug out of the socket. Never remove the plug by pulling the power cord.
- Handle the power cord with care: keep it away from sharp edges and do not jam or strain it. Make sure nobody can trip over the cable.
- If it can be assumed that safe operation is no longer possible, the Condair 505 must be put out of service without delay. Safe operation may be affected in the following events:
  - the Condair 505 is damaged
  - the Condair 505 does not operate correctly
  - the power cord is damaged.

– Except for the steps mentioned in this manual, the user must not carry out further operations with the Condair 505.
– All components that are in contact with water must be thoroughly rinsed with tap water if the Condair 505 has not been in use for an extended period, before filling the unit and after each deliming cycle.
– Use only original accessories and genuine spare parts from your Condair supplier.
– The Condair 505 may not be modified in any way without written consent from the manufacturer.

3 Description of product

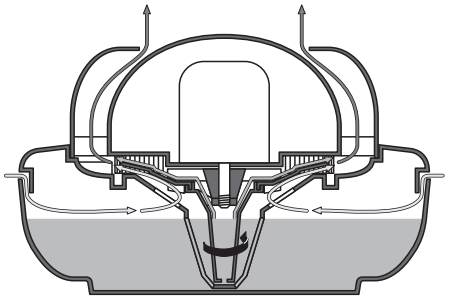
3.1 Special version



The special version **Condair 505 S** is designed for direct connection to the water supply. The Condair 505 S is equipped with a float valve and a connector for an overflow pipe.

Note: The standard Condair 505 may be upgraded to the special version at any time – please contact your Condair representative.

3.2 Functional description

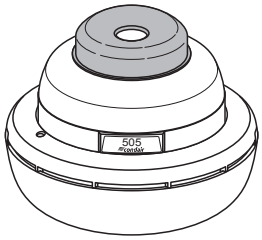


The Condair 505 uses the atomizer principle. The suction piece takes in the water from the reservoir. Then the whirl disk moves the water towards the atomizer ring where it is transformed into aerosol fog.
The vanes of the whirl disk take in the air via the radial openings of the housing. This air stream passes by the atomizer ring and directs the aerosol fog out of the humidifier in an upward direction.

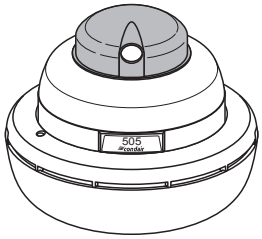
The atomizer unit is driven by a maintenance-free electric motor.

3.3 Accessories and options

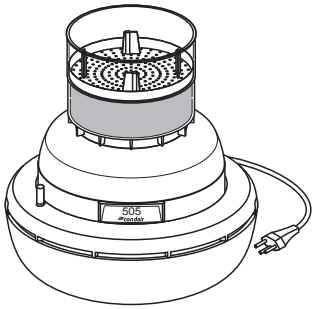
The following accessories and options are available for the Condair 505:



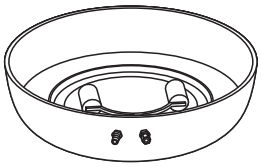
– **Directional cap vertical (“Z72”)** for vertical adjustment of the aerosol fog.



– **Directional cap horizontal (“Z73”)** for horizontal adjustment of the aerosol fog.



– **Deliming cap (“Z70”)** for lime-free refill.



– **Water reservoir with float valve and safety overflow device** for permanent water supply to the humidifier.

– **Humidistat H-4** for automatic control of the Condair 505 S.

4 Location and installation

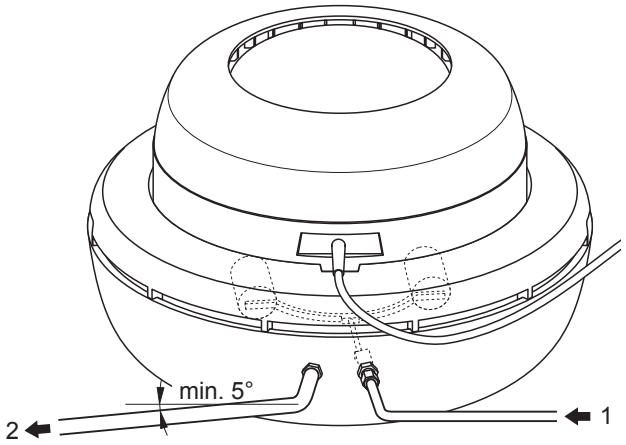
4.1 Notes on correct positioning

Please observe the following notes for correct location of the Condair 505:

- **Caution!** The Condair 505 must not be used in hazardous locations and areas that are exposed to water splashes.
- Locate the Condair 505 in a way that the aerosol fog **spreads freely**. Any obstacle hampering the spread of the aerosol fog causes turbulence and accumulation that may lead to condensation.
  Please observe the following minimum clearance between the humidifier and nearby objects:
  - **min. clearance above the unit: 1.50 m**
  - **min. clearance around the unit: 0.30 m**
  - **min. clearance from cold outer walls and windows: 1.00 m**
- When using tap water or partially demineralized water the soluble mineral salts may precipitate. Use fully demineralized water if non-precipitating operation is required.

4.2 Installation work (Condair 505 S only)

Consult the following information for connecting the Condair 505 S to the water supply and the sewage line.



Water supply (1)

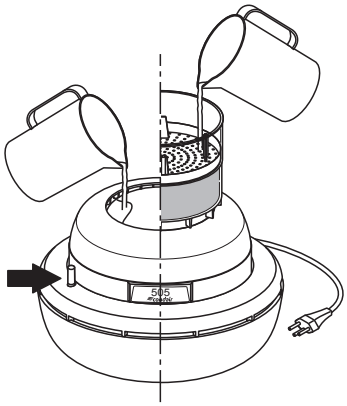
Supply line $Ø_{min}$:	4/6 mm (copper tube)
Admissible water pressure:	0,3…4,0 bar
Admissible water temperature:	1…40 °C
Water quality:	tap water, partly or fully demineralized water

Overflow (2)

Overflow line $Ø_{min}$:	G 1/2"
Min. fall:	5°

Note: It is mandatory to connect the overflow device to the sewage line.

5 Operation



Topping up

Caution! Disconnect the unit from the mains before topping up (pull the plug out of the socket).

- Pour fresh water into the aerosol discharge hood or into the deliming cap (accessory “Z70”), respectively. Watch the level indicator:
  - water reservoir **half full**:
    grey mark on level indicator is in view.
  - water reservoir **full**:
    red mark on level indicator is in view.

  If you wish to refill the Condair 505 directly from the tap, remove the atomizer unit and the support disk from the reservoir. Pour water into the reservoir. **Do not exceed the imprinted level mark** (corresponding to the maximum filling height when the unit is reassembled). Then mount the support disk and the atomizer unit.

  Caution! Do not overfill the reservoir (watch the maximum level mark) as this may affect correct operation.

  Caution! Use only fresh tap water or partly/fully demineralized water.

  Caution! When using additives make sure they do not affect health (consider long-term effects, too). Buy certified products only.
  Do not use additives based on essential oils because the may cause damage to the plastic parts of the humidifier.

Setting the unit into operation

- Check the unit for possible damage.
  Caution! If the unit is damaged do not set it into operation.
- Make sure the operating voltage of the Condair 505 (see type plate on unit) matches the local supply voltage, then connect the unit to the mains.

The Condair 505 starts humidification without delay.

Operation

In daily operation the water level and the humidity must be monitored on a regular basis. For monitoring the humidity we recommend to use a hygrometer (e.g. the Condair hygrometer) placed in a suitable location (not too close to the humidifier). Disconnect the unit from the mains as soon as the desired level of humidity is obtained.

Please consider the following directional temperature and humidity values for **optimal humidification**:

Room temperature	**Humidity**
18 °C	**55 %rh**
20 °C	**50 %rh**
22 °C	**45 %rh**

Note: For **semiautomatic** (Condair 505) and **fully automatic** operation (Condair 505 S) use the appropriate humidifier together with the **humidistat H-4**. The humidistat H-4 switches the humidifier on and off depending on the selected nominal humidity. The humidistat H-4 is supplied with a separate installation manual.

Setting the unit out of service

Disconnect the humidifier from the mains. Empty the water reservoir, then clean the unit following the instructions given in chapter 6.

6 Maintenance and cleaning

6.1 Cleaning intervals

Regular checks and periodic maintenance are indispensable prerequisites for hygienic operation:

– **Regular checks**

  Once a week you should carry out a regular check that includes the following steps:

  – cleaning of the water reservoir.

  – checking all components being in contact with water (i.e. filter, suction piece, whirl disk, guiding disk, atomizer ring, etc.).

– **Periodic maintenance**

  The maintenance interval depends on the operating conditions. We recommend the following intervals:

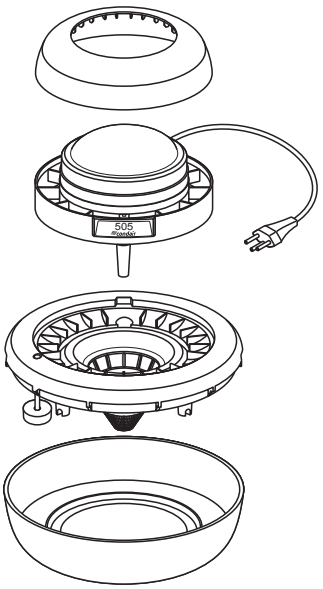
  – high ratio of dust and/or hard water: **1 week**

  – medium ratio of dust and/or normal water: **1 - 2 weeks**

  – low ratio of dust and/or demineralized water: **2 - 4 weeks**

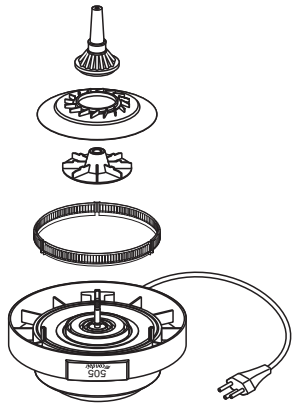
Note: please refer to chapters 6.2 and 6.3 for detailed descriptions of the dismantling, assembly and cleaning procedures required by particular components.

6.2 Dismantling and assembly



Dismantling

- Disconnect the unit from the mains (pull the plug out of the socket)
- Remove the atomizer unit and the support disk.
- Remove the aerosol discharge hood from the atomizer unit.



- Firmly hold the whirl disk while turning the suction piece anticlockwise until it comes off.
- Remove the whirl disk and the guiding disk.
- Carefully dismantle the segments of the atomizer ring.

Caution! Cleaning and replacement of defective parts do not require **further dismantling which is inadmissible** and may void the warranty.

Assembly

Proceed in the reverse order of the dismantling procedure to reassemble the unit.

6.3 Cleaning

Use lukewarm soapy water to clean the **water reservoir**, **support disk**, **suction piece**, **whirl disk**, **guiding disk**, **aerosol discharge hood** and the **segments of the atomizer ring**. Then thoroughly rinse all components with water.

If the components are heavily encrusted with lime, soak them in 8 % formic acid until the lime layer is dissolved. Finally, clean the components as described above.

When cleaning make sure:

– not to damage the outer edges of the whirl disk. Defective disks reduce the efficiency of the humidifier and can cause damage to the bearing (unbalance).

– not to bend the lamellas of the atomizer ring. Bent lamellas adversely affect the atomization process.

– the inlet of the suction piece is open so that the water may pass through.

Use a cloth or a sponge moistened with soapy water to clean the **motor housing**. Then rub the components with a wet cloth (clean water) several times. If the components are heavily encrusted with lime, rub them with a cloth soaked in an 8 % formic acid solution. Allow the acid to act for some time and then thoroughly clean the motor housing with water.

Caution! Prevent the cleaning agent from getting into the electric motor. Never clean the motor housing under the tap and never dip it in liquids of any kind.

Notes on cleaning agents:

– Formic acid is available at pharmacies.
Caution! Although formic acid is harmless to the skin, it attacks the mucous membranes. Therefore protect the eyes and the respiratory tract from contact with the acid or its fumes. Wear safety goggles and work in a well-ventilated room or outdoors.

– The use of disinfectants is allowed only when they leave no toxic residues. In any case the components must be thoroughly rinsed with water after cleaning.

– **Caution!** Do not use solvents or other aggressive liquids for cleaning.

– **Do not use** scouring equipment (wire brush, scouring cloth, etc.) for cleaning because they leave scratches that encourage the growth of microorganisms.

6.4 Replacement of defective parts

The customer **must not carry out repairs** other than the replacement of the following parts:

– water reservoir

– support disk

– suction piece

– whirl disk

– guiding disk

Please follow the instructions given in chapter 6.2 for the dismantling of particular components.

7 What if ...?

The following table presents malfunctions that might occur during humidifier operation, explains their causes and suggests appropriate remedial action.

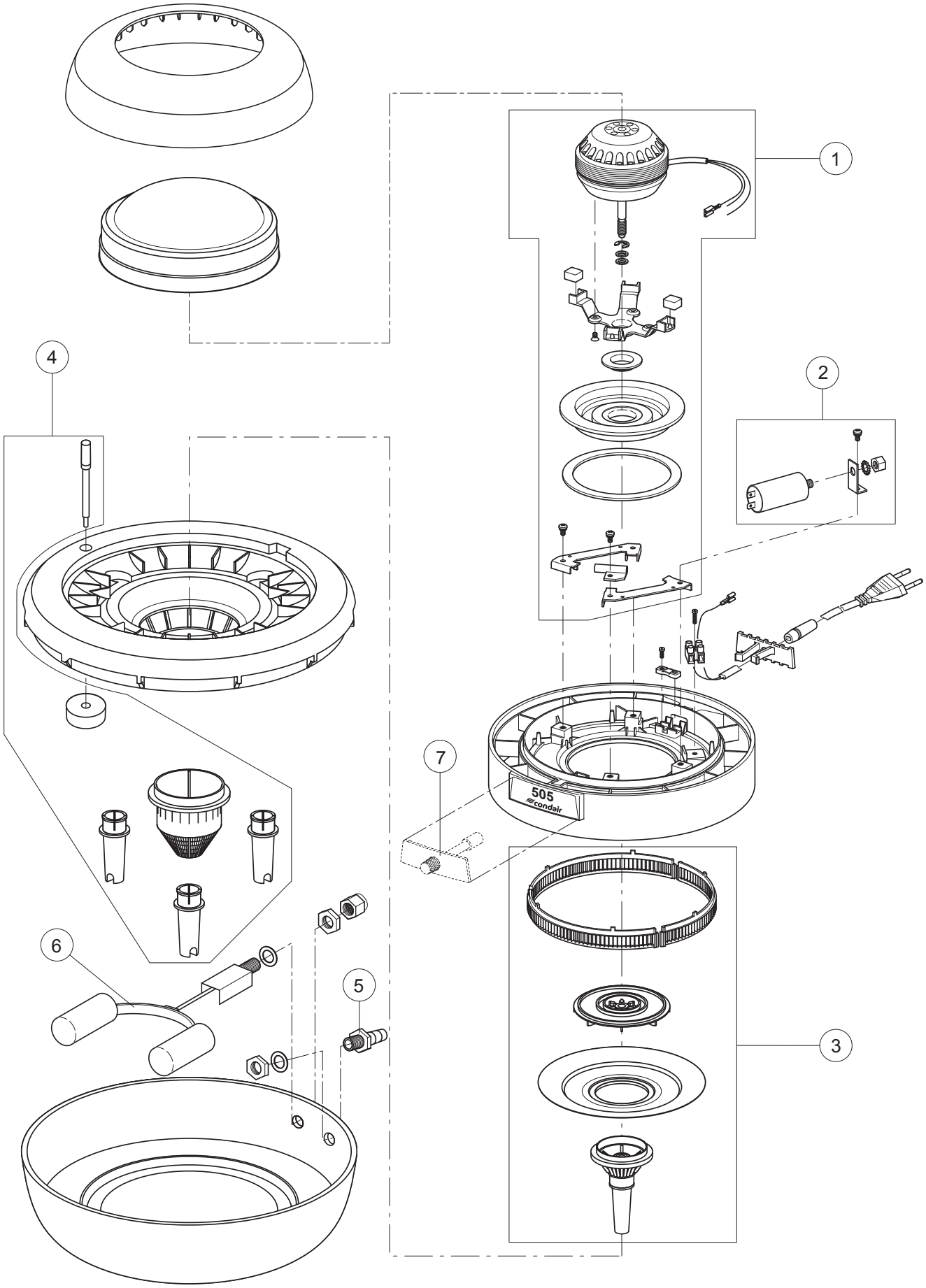
Malfunction	Cause	Remedy
Humidifier is running but there is no aerosol fog.	No water in the reservoir.	Top up (see chapter 5).
	Suction piece clogged.	Clean suction piece (see chapter 6).
Humidifier is not running although it is connected to the mains.	Excessive heat has triggered the thermal circuit breaker of the motor.	Let the motor cool down (approximately 30 minutes), then the unit will restart automatically.
	Motor defective.	Contact your local Condair representative.
	Unit has been switched off by external humidistat	Check external humidistat and readjust, as required.
Overheated unit has cooled down, restarts but stops again after a short while.	Water level in the reservoir exceeds the maximum level mark.	Check water level.
	Unit heavily soiled.	Clean the unit (see chapter 6).
When running, the humidifier emits a rumbling sound.	Whirl disk mounted incorrectly.	Mount whirl disk correctly.
	Suction piece has come loose.	Fix suction piece.

Please contact your Condair representative in case you cannot eliminate a particular source of trouble by yourself.

8 Specifications

Designation of unit	Condair 505
Dimensions (Ø x H)	360 x 230 mm
Weight	3.5 kg (empty), 6.5 kg (ready for use)
Mains connection	via built-in three-core power cord
Supply voltage	220…240 V/50…60 Hz or 100…110 V/50…60 Hz
Humidification capacity	approx. 500 g water/hour, suitable for locations up to 150 m^3
Power consumption	40 W
Acoustic capacity level	50 dBA
Sound intensity level	44 dBA
Drive	maintenance-free electric motor with thermal circuit breaker
Water reservoir	made of polypropylene, capacity: 3 litres
Water quality	tap water, partly or fully demineralized water
Ambient temperature	1…40 °C
Ambient humidity	0…95 %rh

Condair 505S



Pos.	Art. Nr.	Ersatzteile	Spare parts	Pièces de rechange	Pezzi di ricambio
1	22.1491 22.1490	Motor kpl. 220…240V/50…60Hz Motor kpl. 100…110V/50…60Hz	Motor cpl. Motor cpl.	Moteur cpl. Moteur cpl.	Motore cpl. Motore cpl.
2	22.0006 22.0007 22.0008	Kondensator 1 µF, 220…240V/50+60Hz Kondensator 4 µF, 100…110V/50Hz Kondensator 3 µF, 100…110V/60Hz	Capacitor Capacitor Capacitor	Condensateur Condensateur Condensateur	Condensatore Condensatore Condensatore
3	22.0608	Zerstäuberteil	Atomizer assembly	Atomiseur assy.	Nebulizzatore cpl.
4	22.0585	Niveaueinheit	Level unit	Unité de niveau	Unità di livello
5	22.0009	Ablaufanschluss	Drain connection	Raccord d'écoulement	Collegamento di scarico
6	20.0471 22.0010	Doppelschwimmer kpl. Doppelschwimmer kpl. (NL)	Double float cpl. Double float cpl. (NL)	Flotteur double cpl. Flotteur double cpl. (NL)	Galleggiante doppio cpl. Galleggiante doppio cpl. (NL)
7	22.0293	Schalter kpl. (nur grüne Version)	Switch cpl.	Commutateur cpl.	Interruttore cpl.

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